

Paradigm Revolution

Self-Reg in Schools & Communities

Presentation Summary from Dr. Stuart Shanker (D. Phil), CEO of The MEHRIT Centre and Distinguished Research Professor of Philosophy and Psychology, York University, Written by John Hoffman, TMC Writer

What is a paradigm revolution?

A paradigm revolution is more profound than a paradigm shift. What people refer to as a paradigm shift is often the result of bouncing around trying to find the best way to reach a set of widely shared goals. For example, a paradigm shift in autism treatment would be switching from a behaviourist approach such as ABA/IBI to a developmental approach such as RDI. A paradigm revolution goes farther. It is about adopting a whole new way of thinking and asking a whole new set of questions.

A paradigm revolution is not something that is created or sold. It arises to meet a need in the existing climate. Therefore, self-regulation is not, and cannot be, simply a program. It is a whole new way of thinking. The key idea that informs this new way of thinking is that living and learning are grounded in self-regulation. That gives us a different way of framing and understanding human behaviour and learning driven by dramatic advances in our understanding of the impact of excessive stress on human behaviour and learning.

The need to which we are responding

We are seeing a rapidly growing number of students with problems in mood, behaviour, attention, and physical well-being, all caused by excessive stress. Pioneering stress researcher Walter Cannon's definition of stress was, in essence, anything that requires an organism to expend energy in order return to homeostasis. We now know that, while stress is necessary for optimum performance, when a person has to expend too much physical, emotional, and cognitive energy dealing with stress, their performance deteriorates because they have insufficient energy left over to devote to the task or challenge at hand.

The key problem affecting children's self-regulation in today's classrooms is hidden stress. Some aspects of education (having to focus or concentrate, tune out distractors, or sit still) are stressors for children. These stressors can be positive or negative depending on the child's state of arousal. If a child is calm, alert, and engaged the challenges of education can be positive. And not enough stress causes boredom and disengagement. But if a child is in too high a state of arousal, then normative challenges can become stressors. And dealing with chronically high levels of stress will have a negative impact on children's behaviour and learning. Likewise, high levels of stress can affect teachers' performance.

Our task is learning how to mitigate the stress students and teachers experience in classrooms. This gives us a new way of thinking about how to improve learning and school achievement, as well as children's behaviour. Another way of phrasing the question is, "How long can we keep a child at the optimal level of stress he or she can handle?"

How to move forward with the paradigm revolution

Changing educational practices so as to reduce excess stress and keep children at the level of positive stress they can handle is not a matter of simply putting science into action.



Series on Self-Regulation: What You Need to Know October 2015

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Rather, succeeding with this paradigm revolution is about developing the science together. We (teachers, scientists, policymakers, etc.) are all collaboratively engaged from our different perspectives. Our efforts can be informed by adapting neuroscientific and clinical discoveries about what affects children's self-regulation. But self-regulation is not about scientists telling teachers what to do. That undermines the role of the teacher. In fact, teachers are the most important scientists involved in this process.

In his book, *The Art of Tracking*, Louis Liebenberg shows that Kalahari Bushmen are scientists in the true meaning of the world. They are constantly observing their environment, framing and testing hypotheses and making new ones. Teachers doing self-reg are doing exactly the same thing.

Thus, it is really important to understand that there is no fixed method with respect to implementing self-regulation strategies in schools. We should never have a completely set plan for how we are going to do self-reg. It is more a question of being good field scientists engaged in a process of trial and error, where we are constantly observing our environment, framing and testing hypotheses, and making new hypotheses based on what we have observed and learned.

One important practical question for educators is how to deal with kids who are stress reactive. If a child is stress reactive, and some definitely are, they will not be in "ideal learning brain" mode much of the time. Likewise, if teachers' stress levels are too high, their job performance and satisfaction will suffer.

The Five Rs

Solving these kinds of problems using a self-regulation based approach is a five-step process: Reframe, Recognize, Reduce, Reflect, and Respond.

Reframe: *Read the signs and reframe the behaviour as a stress response rather than misbehaviour or disobedience. Often this means not responding to a child's behaviour immediately. Instead teachers are advised to "watch, wait, and wonder." Pausing gives the teacher's stress response system a chance to settle down so that the teacher can proceed to the other four Rs.*

Recognize: *Look for stressors that are affecting the child. Observe carefully. Don't assume that your first answer will stay the right answer.*

Reduce: *Reduce superfluous stressors. One of the challenges of education is that a certain amount of stress is normal and positive. The question is reducing the stressors that are not helping the child.*

Reflect: *Become aware of what it feels like to be calm, anxious, alert, or in fight or flight mode.*

Respond: *Figure out what brings you back to being calm and alert. We're aiming for adaptive rather than maladaptive coping strategies.*

It is important to not focus on just one domain because we need to work on all five. And it's important to remember that self-reg is a process, not a quick fix, and that every child, class, teacher, and school is different—and they keep changing all the time!

Enabling Children

Often, adults need to do the five steps for children. But ultimately children need to learn to do it themselves. And they can be taught how to do it. In clinical experience, even children on the autism spectrum have been taught how to recognize their state of arousal and calm themselves using adaptive strategies.

The bottom line is that if we want to see self-regulated learning in children we need to work on the roots of self-



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regulation first. Attention, memory, and learning problems are rooted in self-regulation problems such as excess stress and also sensory integration problems that interfere with a child's ability to take in information via the senses.

Case example: The impact of colour on classroom environment

Research has shown that light can affect people's inner state. Long wave colours such as yellow, orange, and red are energizing, while short wave colours such as blue and green are more calming. Educators are starting to use this knowledge in their practice. For example, in Cuba, classrooms tended to be painted yellow because they have found that children do math best in a yellow room. In contrast, in the Italian city of Reggio Emilia, they paint classrooms in short wave colours (blue and green) because they feel that it is easier for teachers to energize students than to calm them. And, in Canada, a school librarian in the BC's Bulkley Valley school district found that putting blue filters on lights had a calming affect. Some schools try to use both types of light, for example, painting the classroom green, but rolling down a yellow cloth when it is time for math.

Another Canadian teacher has experimented with matching different kinds of music to different activities or times of the day.

It will most likely take some time plus trial and error to fully understand the impact of colours on children's behaviour and learning, and what environmental changes should be made as a result.

New understandings about the importance of relationships in human development

Back in the 1980s, thinking about early childhood development was mostly about genes. Children had a genetic makeup that was the prime determinant of their development.

Now many scientists are arguing that fundamental force in child development is not what is going on inside the child, but the child-caregiver dyad. We've made a lot of progress in early child development. What we need to know is how to help parents understand children's self-regulation. But before we can do that we have to understand that we can't address arousal regulation in a baby unless you address it in the baby's caregiver. Parents are not going to be able to see and respond to their children's stress if the parents are highly stressed and therefore in "survival brain" rather than "learning brain." In fact, more than 30 years ago, American child psychiatrist Stanley Greenspan started a program designed to help troubled children by soothing their caregivers.

One of our tasks in our paradigm revolution will be to provide parents with the information and support they need so they can take care for their own self-regulation. That will enable them to better read the signs that their child is running on empty and to do what is necessary to reduce their children's stressors and help them return to a calm and alert state.



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